



CoolPoly® D8102

Celanese Corporation - Thermoplastic Elastomer

Tuesday, November 5, 2019

General Information

Product Description

CoolPoly D series of thermally conductive plastics transfers heat, a characteristic previously unavailable in injection molding grade polymers. CoolPoly is lightweight, netshape moldable and allows design freedom in applications previously restricted to metals. The D series is electrically non-conductive and can be used for its dielectric properties.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Electrically Insulating	• Thermally Conductive	
RoHS Compliance	• RoHS Compliant		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm ³	ISO 1183
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Break)	247	psi	ISO 527-2/1A/5
Tensile Strain (Break)	79	%	ISO 527-2/1A/5
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore A, 3 sec)	56		ISO 868
Thermal	Nominal Value	Unit	Test Method
Thermal Conductivity			ASTM E1461
-- ²	9.0	Btu·in/hr/ft ² /°F	
-- ³	19	Btu·in/hr/ft ² /°F	
-- ⁴	22	Btu·in/hr/ft ² /°F	
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.05 in)	HB		UL 94

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	149	°F
Drying Time	1.0 to 2.0	hr
Rear Temperature	356 to 401	°F
Middle Temperature	365 to 410	°F
Front Temperature	374 to 419	°F
Nozzle Temperature	383 to 437	°F
Processing (Melt) Temp	374 to 437	°F
Mold Temperature	68 to 122	°F
Injection Rate	Moderate-Fast	
Back Pressure	< 102	psi

Injection Notes

Zone4 temperature: 195 to 225°C

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Notes

¹ Typical properties: these are not to be construed as specifications.

² Thruplane

³ Flow

⁴ Crossflow